

AMENDMENT
SERIAL NO. 09/731,638
Page: 2

Amendments to the Claims

Claims 1-7 (Cancelled).

8. (Currently Amended) ~~A method as claimed in claim 1~~
~~wherein~~ A method for selecting one of a plurality of radioport
architectures of radioports in a wireless communication network,
said method comprising:
specifying parameters associated with said radioports, said
specifying operation specifies specifying a constant offered load
constraint;
computing composite powers for said radioport architectures
in response to said parameters;
determining cost structures responsive to said composite
powers for said radioport architectures, and said cost structures
are being determined in response to said constant offered load
constraint; and
comparing said cost structures of said radioport
architectures to select said one radioport architecture.

9. (Currently Amended) A method as claimed in claim 8
wherein said computing operation comprises:
(a) identifying sizes of coverage areas of said radioports;
(b) determining channel transmission powers for each of said
sizes of said coverage areas;
(c) computing offered load values for said each of said sizes
of said coverage areas in response to said constant offered load
constraint; and
(d) determining a number of ~~said~~ transmission channels to
support said each of said offered load values, said composite
powers being computed in response to said number of transmission
channels and said channel transmission powers.

AMENDMENT

SERIAL NO: 09/731,638

Page: 3

10. (Original) A method as claimed in claim 9 wherein:
said method further comprises defining said coverage areas to be circular regions of common radii;
said specifying operation provides said radii; and
said operation (a) computes said coverage areas in response to said provided radii.

11. (Original) A method as claimed in claim 9 wherein:
said specifying operation provides a quality of service parameter; and
said operation (d) comprises approximating said number of transmission channels at each of said offered load values in response to said quality of service parameter.

12. (Original) A method as claimed in claim 11 wherein said quality of service parameter is a blocking probability.

13. (Currently Amended) ~~A method as claimed in claim 1 wherein:~~

~~said method further comprises:~~ A method for selecting one of a plurality of radioport architectures of radioports in a wireless communication network, said method comprising:

specifying parameters associated with said radioports;
computing composite powers for said radioport architectures in response to said parameters;

identifying sizes of coverage areas of said radioports, said coverage areas for each of said radioports being circular regions of common radii; ~~and~~

ascertaining a quantity of radioports to support wireless communication in a total service area of said wireless communication network; ~~and~~

determining cost structures responsive to said composite powers for said radioport architectures; said determining operation ~~comprises:~~ including:

AMENDMENT
SERIAL NO. 09/731,638
Page: 4

applying a cost model to determine costs of one of said radioports responsive to said sizes of said coverage areas; and
combining each of said costs with said quantity of said radioports to obtain said cost structures of each of said radioport architectures; and
comparing said cost structures of said radioport architectures to select said one radioport architecture.

Claims 14-15 (Cancelled).

16. (Currently Amended) ~~A computer-readable storage medium as claimed in claim 15~~ A computer-readable storage medium containing executable code for instructing a processor to select one of a plurality of radioport architectures of radioports in a wireless communication network, said executable code instructing said processor to perform operations comprising:
specifying parameters associated with said radioports, said specifying operation specifying a constant channel capacity constraint;
computing composite powers for said radioport architectures in response to said parameters, said executable code instructing said processor to perform further operations including:
defining a number of transmission channels allocated to each of said radioports, said number being associated with said constant channel capacity constraint;
varying channel transmission powers for said transmission channels; and
calculating said composite powers in response to said number of transmission channels and said varying channel transmission powers;
determining cost structures responsive to said composite powers for said radioport architectures, said cost structures

AMENDMENT
SERIAL NO. 09/731,638
Page: 5

being determined in response to said constant channel capacity constraint, said determining operation including:

utilizing a propagation model to identify sizes of coverage areas of said radioports, said coverage areas for each of said radioports being circular regions of common radii, and said sizes of said coverage areas varying in response to said varying channel transmission powers;
for each of said sizes, ascertaining a quantity of radioports to support wireless communication in a total service area of said wireless communication network;
applying a cost model to determine costs of one of said radioports responsive to said sizes of said coverage areas; and
combining each of said costs with said quantity of said radioports to obtain said cost structures of each of said radioport architectures; and
comparing said cost structures of said radioport architectures to choose a least-cost one of said radioport architectures to be said one radioport architecture.

17. (Original) A computer-based method for selecting one of a plurality of radioport architectures of radioports in a wireless communication network, said method comprising:

specifying parameters associated with said radioports, said specifying operation specifying a constant offered load constraint;

identifying sizes of coverage areas of said radioports;
ascertaining a quantity of radioports to support wireless communication in a total service area of said wireless communication network in response to said sizes of said coverage areas;

computing composite powers for said radioport architectures in response to said parameters;

AMENDMENT
SERIAL NO. 09/731,638
Page: 6

determining cost structures responsive to said composite powers for said radioport architectures, said cost structures being determined in response to said constant offered load constraint, said determining operation including:

applying a cost model to determine costs of one of said radioports responsive to said sizes of said coverage areas; and

combining each of said costs with said quantity of said radioports to obtain said cost structures of each of said radioport architectures; and

comparing said cost structures of said radioport architectures to choose a least-cost one of said radioport architectures to be said one radioport architecture.

18. (Original) A computer-based method as claimed in claim 17 wherein:

said method further comprises defining said coverage areas to be circular regions of common radii;

said specifying operation provides said radii; and

said identifying operation computes said sizes of said coverage areas in response to said provided radii.

19. (Currently Amended) A computer-based method as claimed in claim 17 wherein said computing operation comprises:

(a) determining channel transmission powers for each of said sizes of said coverage areas;

(b) computing offered load values for said each of said sizes of said coverage areas in response to said constant offered load constraint;

(c) for said each offered load value, determining a number of said transmission channels to support said each offered load value, said composite powers being computed in response to said number of transmission channels and said channel transmission powers.

AMENDMENT

SERIAL NO. 09/731,638

Page: 7

20. (Original) A computer-based method as claimed in claim 19 wherein:

said specifying operation provides a blocking probability parameter; and

said operation (c) comprises approximating said number of transmission channels at each of said offered load values in response to said blocking probability parameter.